Goddard Procedural Requirements (GPR)

DIRECTIVE NO.	GPR 8700.4H	**APPROVED BY Signature:**	*Original Signed By*
EFFECTIVE DATE:	June 12, 2012	**NAME:**	Judith N. Bruner
EXPIRATION DATE:	June 12, 2017	**TITLE:**	Director, Safety and Mission Assurance

COMPLIANCE IS MANDATORY

Responsible Office: 301 /System Review Office

Title: Goddard Systems Reviews

PREFACE

P.1 PURPOSE

This procedure establishes the process for planning, conducting, and reporting Goddard Systems Reviews (GSRs) for Goddard Space Flight Center (GSFC) products.

The Goddard Systems Review process represents the Goddard-specific implementation of Program and Project Lifecycle Review requirements as documented in NPR 7120.5.

P.2 APPLICABILITY

Except as noted below, the GSR process applies to all GSFC products within the scope of the GSFC Quality Management System. GSRs are used to evaluate the status of a flight or flight support systems project at the mission system level and at the major system element level (i.e., spacecraft, instrument(s), and ground system). GSRs are supported by project-conducted Engineering Peer Reviews (EPRs) to the extent required by GPR 8700.6, which assess the status of subsystem or lower assembly levels. The results of the EPRs constitute a key input to the GSRs.

When the GSFC end-item product consists of a deliverable sub-system or instrument, this GSR process does apply. In that case, the review sequence described within this document may be modified as appropriate, subject to approval in the Systems Review Plan (SRP).

The GSR process does not apply to non-flight products, to sounding rockets and associated payloads, to balloons and associated payloads, or to deliverable aircraft instruments and payloads.

P.3 AUTHORITIES

a. NPD 1280.1, NASA Integrated Management System Policy
b. NPR 7120.5, NASA Space Flight Program and Project Management Requirements

P.4 APPLICABLE DOCUMENTS

a. NPD 8610.24, Launch Services Program Pre-launch Readiness Reviews
b. GPR 1060.3, The Goddard Governance System

c. GPR 1410.2, Configuration Management
d. GPR 8700.6, Engineering Peer Reviews
e. GSFC-STD-1000, GSFC Rules for the Design, Development, Verification, and Operation of Flight Systems
f. GSFC-STD-1001, Criteria for Flight and Flight Support Systems Lifecycle Reviews

P.5 CANCELLATION

GPR 8700.4G, Integrated Independent Reviews

P.6 SAFETY

N/A

P.7 TRAINING

N/A

P.8 RECORDS

Record Title	Record Custodian	Retention
Systems Review Plan (SRP) (Initial and all Revisions); Goddard Systems Review (GSR) Presentations and Supporting Material; GSR Reports (including RFAs); Project responses to RFAs; Goddard Systems Review Team (GSRT) decisions on project responses.	Project Manager	*NRRS 8/101 Permanent. Cut off records at close of program/project or in 3-year blocks for long term programs/projects. Transfer to records center storage. Transfer to National Archives 7 years after cutoff.
Standing Review Board (SRB) and GSRT Presentation Material to Center Management Council (CMC) for Key Decision Point (KDP) readiness reviews	Project Manager	*NRRS 8/101
Independent Flight Readiness Report (Red Book)	Chief, Systems Review Office	*NRRS 8/101

**NRRS – NASA Records Retention Schedules (NPR 1441.1)*

P.9 MEASUREMENT/VERIFICATION

The System Review Office (SRO) shall:

a. Systematically solicit feedback on the perceived value of the review process to the success of Goddard projects. Feedback obtained from Program and Project Managers subsequent to each GSR and periodically from the Goddard Center Management Council (CMC) shall be summarized, evaluated for improvement opportunities.
b. Assess the composite set of Request for Action (RFA) subject matter, responses, and closure statistics for themes, trends, and cross-cutting issues. These results, along with identified improvement opportunities, shall be reported to the CMC monthly as part of the Monthly Status Reviews.

PROCEDURES

In this document, a requirement is identified by "shall," a good practice by "should," permission by "may" or "can," expectation by "will," and descriptive material by "is."

The primary responsibility for successful execution of the GSR process on an individual product rests with the manager. Because in most instances, this process deals principally with flight project activity, this individual is hereafter referred to as the Project Manager.

The procedures defined in the following sections are directly applicable to all GSFC projects. The approved SRP (see section 1 below) documents and tailors the approach the project will use to implement.

In addition to the required Project Lifecycle reviews conducted by the agency chartered Standing Review Board (SRB), Goddard implements a series of system level reviews conducted by a center-chartered Goddard Systems Review Team. The purpose of the center-level reviews is to support and augment the agency level reviews by performing a more detailed technical and programmatic risk assessment at the project element (e.g., spacecraft bus, instrument, ground system) level.

In order to promote seamless integration of results between Goddard center-level reviews and Agency chartered reviews, wherever practical, there is a common team membership that serves on both the SRB and the GSRT for any program or project. The GSRT chair normally serves as a member of the SRB. Appropriate other multi-discipline experts or other key subject matter experts from the GSRT may also serve as members of the SRB.

1. Systems Review Plan (SRP)

1.1 After consultation with the Chief of the System Review Office (SRO) to ensure proper understanding of these procedures and their applicability to the specific project, the Project Manager shall submit a SRP to the Director of Safety and Mission Assurance (SMA) for approval at least four months prior to the anticipated date of the first GSR.

Contents of the SRP shall include:

a. The sequence and anticipated timeframe for each of the GSRs, as well as for the planned Gateway Reviews and Pre-Launch Readiness Review.
b. A concise statement of the purpose and objectives of each GSR.
c. The approach to be employed by the project for EPRs, and the EPR interface with the GSR process. This approach can be documented separately in a Engineering Peer Review Plan referenced in the SRP.
d. The name of the GSRT chair, and the GSR documentation and reporting process, including the process for closeout of RFAs.

1.2 The Director of SMA shall approve the initial issue and all revisions to the SRP.

1.3 The SRP shall be updated by the Project Manager as needed to maintain consistency with current project planning and shall be controlled in accordance with GPR 1410.2 on Configuration Management.

2. Goddard System Reviews

2.1 The specific set of GSRs and the content of the GSRs for a project may be tailored based on project scope, complexity, and acceptable risk. GSRs are usually conducted at the critical milestones illustrated in Figure 1.

2.2 In order to address additional appropriate detail, GSRs are conducted at selected key milestones for the spacecraft and each instrument. Table 1 lists a complete set of GSRs for GSFC projects.

2.3 Detailed guidance for the content of each GSR delineated in Table 1 is contained in GSFC-STD-1001. That guidance provides typical purpose, objectives, and success criteria that will be used by the GSRT to judge adequacy of project progress relative to expectations at each review. In addition, that guidance may be tailored appropriately for application to spacecraft and instrument reviews.

Figure 1

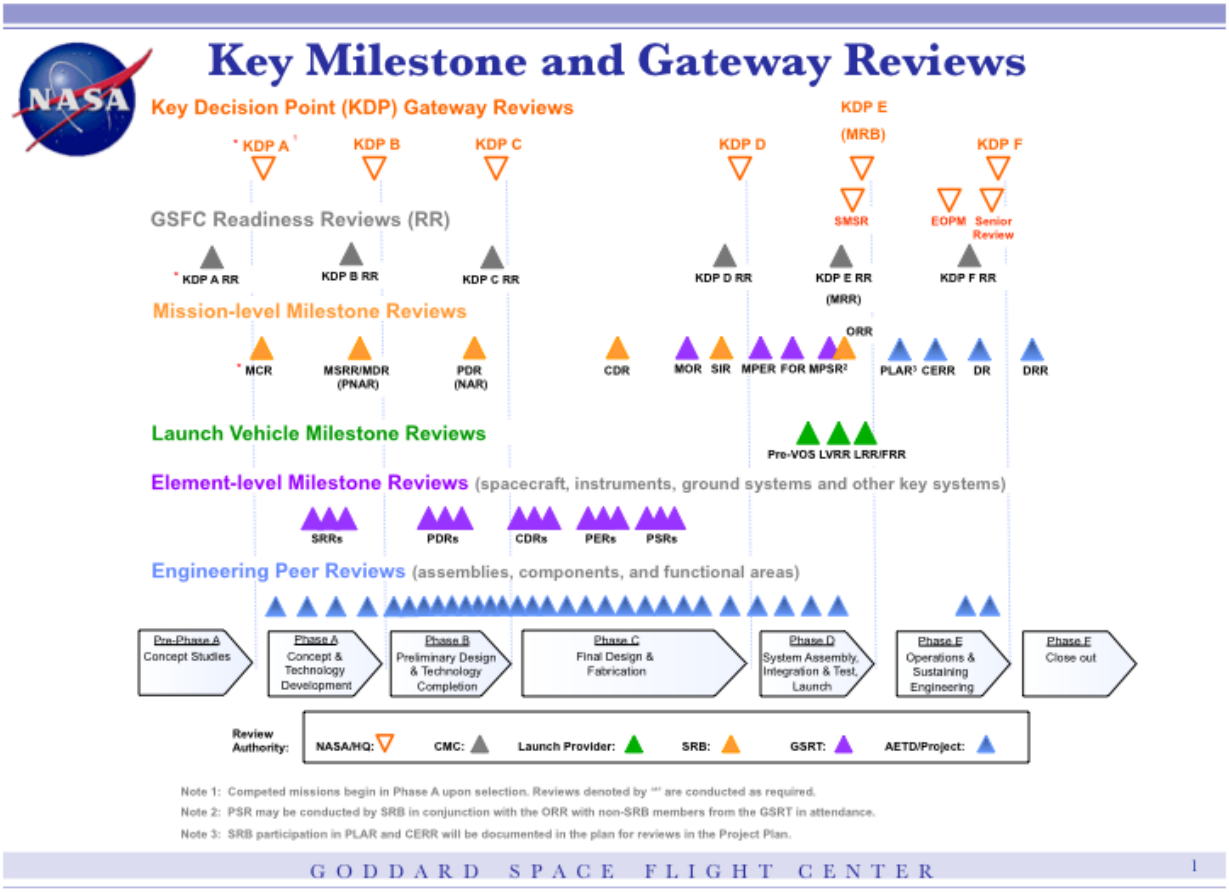
Key Milestone and Gateway Reviews
Key Decision Point (KDP) Gateway Reviews
KDP A
KDP B
KDP C
KDP D
KDP E (MRB)
KDP F
SMSR
EOPM
Senior Review
GSFC Readiness Reviews (RR)
KDP A RR
KDP B RR
KDP C RR
KDP D RR
KDP E RR (MRR)
KDP F RR
Mission-level Milestone Reviews
MCR
MSRR/MDR (PNAR)
PDR (NAR)
CDR
MOR
SIR
MPER
FOR
MPSR
ORR
PLAR
CERR
DR
DRR
Launch Vehicle Milestone Reviews
Pre-VOS
LVRR
LRR/FRR
Element-level Milestone Reviews (spacecraft, instruments, ground systems and other key systems)
SRRs
PDRs
CDRs
PERs
PSRs
Engineering Peer Reviews (assemblies, components, and functional areas)
Pre-Phase A Concept Studies
Phase A Concept & Technology Development
Phase B Preliminary Design & Technology Completion
Phase C Final Design & Fabrication
Phase D System Assembly, Integration & Test, Launch
Phase E Operations & Sustaining Engineering
Phase F Close out
Review Authority:
NASA/HQ:
CMC:
Launch Provider:
SRB:
GSRT:
AETD/Project:
Note 1: Competed missions begin in Phase A upon selection. Reviews denoted by "*" are conducted as required.
Note 2: PSR may be conducted by SRB in conjunction with the ORR with non-SRB members from the GSRT in attendance.
Note 3: SRB participation in PLAR and CERR will be documented in the plan for reviews in the Project Plan.
GODDARD SPACE FLIGHT CENTER
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Table 1

Typical GSR Sequence for GSFC Projects

Review Title	Mission	Element				
	Observatory	S/C	Grnd Sys	Payloads		
				Instr 1	Instr 2	Instr n,
Mission Concept Review (MCR)	Project/GSRT	-	-	-	-	-
Systems Requirements Review / System Definition Review (SRR/SDR)	SRB	GSRT	GSRT	GSRT	GSRT	GSRT
Preliminary Design Review (PDR)	SRB	GSRT	GSRT	GSRT	GSRT	GSRT
Critical Design Review (CDR)	SRB	GSRT	GSRT	GSRT	GSRT	GSRT
Mission Operations Review (MOR)	GSRT	-	-	-	-	-
System Integration Review (SIR)	SRB	-	-	-	-	-
Pre-Environmental Review (PER), or Test Readiness Review (TRR)	GSRT	GSRT	GSRT	GSRT	GSRT	GSRT
Flight Operations Review (FOR)	GSRT	-	-	-	-	-
Pre-Shipment Review (PSR)	GSRT	GSRT	-	GSRT	GSRT	GSRT
Operational Readiness Review (ORR)	SRB	-	-	-	-	-
LV Flight Readiness Review (LVFRR)	KSC	-	-	-	-	-
Launch Readiness Review (LRR)	KSC	-	-	-	-	-
Post-Launch Assessment Review (PLAR)	Project	-	-	-	-	-
Critical Events Readiness Review (CERR) – if required	Project	-	-	-	-	-
Decommissioning Review (DR)	Project					
Disposal Readiness Review (DRR)	Project					

3. Membership of Goddard System Review Team

3.1 All members of the GSRT shall be independent of the project team, including all participating outside organizations, and the program of which it is a part. Accordingly, the immediate supervisors of those performing work on the project should not serve as members of the GSRT.

3.2 All members of the GSRT, both civil servant and non-civil servant, shall be vetted for Personal Conflict of Interest (PCI) and Organizational Conflict of Interest (OCI) by the GSFC Office of Chief Counsel. This is normally accomplished through the proposed GSRT member completing and signing a self-certification of no conflict of interest form. The Office of Chief Counsel will disposition any identified conflicts of interest.

3.3 The projected availability of all GSRT members throughout the project life cycle to provide continuity is an important consideration in their selection.

3.4 The GSRT chair should possess the ability to span the full scope of project technical and programmatic considerations. The chair shall be identified within and approved upon approval of the SRP.

3.5 The remainder of the GSRT, typically an additional 4 to 10 people depending on the scope, complexity, and acceptable risk of the project, should be selected based on their technical and systems management skills, with particular emphasis on the areas of highest risk for the project. These members should consist of experts from within and outside of GSFC in order to provide consideration of best practices and lessons learned from a broad spectrum of organizations.

3.6 Prior to the first GSR and after consultation with the chair and the Project Manager, the Chief of the SRO shall appoint all GSRT members in a memo to the Project Manager that is signed by the Chief, SRO.

3.7 If there are changes to the GSRT membership for subsequent reviews, appointment of new members shall be similarly documented and approved. For ground system and operations reviews a different GSRT chair may be assigned by the SRO that has subject matter expertise in the conduct of these reviews. Normally the mission GSRT chair will serve as a member of the GSRT for these ground systems and operations reviews.

4. Standing Review Board Membership

4.1 The requirement for convening a SRB is levied in NPR 7120.5. The NASA Standing Review Board Handbook further expands on the review processes conducted by the SRB. This GPR specifically describes the role of the SRO in implementing these SRB processes**.** SRB membership for National Aeronautics and Space Administration (NASA) programs, category 1 projects and category 2 projects (with a lifecycle cost greater than $250 million) will be managed by a review manager assigned by the Director, Office of Evaluation as documented in NPR 7120.5. SRB membership for GSFC category 2

projects (with lifecycle cost less than $250 million) and GSFC category 3 projects will be managed by the Systems Review Office in collaboration with the program and GSFC project office.

4.2 For all SRBs for GSFC programs or projects the following process is used for nomination of the SRB chair.

a. When a SRB for a GSFC program or project is being initially impaneled, the Chief, SRO will work with the GSFC project division and project/mission manager to develop a list of candidates for consideration. Each of the candidates will be screened for acceptability by the appropriate mission directorate/division office at NASA Headquarters (HQ). Each of the candidates should also provide a positive confirmation of their willingness and availability to serve as chair if their nomination is approved. Once a list of viable candidates is obtained, the Chief, SRO will work with the GSFC project division and project/mission manager to come up with a recommended prioritized list. The Chief, SRO will also request biographical information from each candidate.

b. The Chief, SRO will forward the prioritized candidate list with their biographical information to the Directors of the Safety and Mission Assurance Directorate, Flight Project Directorate and Applied Engineering and Technology Directorate (AETD). The Directors will respond with their preferred prioritization of the candidates along with names of any additional candidates they would like to see under consideration. Once agreement has been reached on the candidate prioritization the final prioritized list is forwarded to the Deputy Center Director and Center Director for their approval/selection of the nominee to forward to NASA HQ.

c. In the case of the replacement of a SRB chair on an existing board a more streamlined approach can be used if there is only one viable or preferred candidate. The Chief of the SRO and the GSFC project division and project/mission manager will ensure that this single candidate is acceptable to all parties at GSFC and NASA HQ. Once this agreement has been reached the single name will be forwarded to the Deputy Center Director and Center Director for their approval in forwarding the name to NASA HQ.

4.3 A similar process will be used for the SRB team nomination where the SRB full team membership list will be forwarded to the Directors of the SMA Directorate, Flight Project Directorate and AETD for their comment and concurrence. After disposition of these comments, the final SRB team list will be forwarded to the Deputy Center Director and Center Director for concurrence.

5. Conduct of Goddard System Reviews

5.1 Prior to each GSR, the Project Manager and the GSRT chair shall review the objectives defined in the approved project SRP and the applicable criteria for the upcoming review (contained in GSFC-STD-1001) as well as project status and issues in order to finalize timing of the review, determine adequacy of review team membership, and define applicable project documents needed to support the upcoming review. In addition, they should jointly develop and document specific agenda and success criteria for the upcoming review.

5.2 Based on the agenda, the Project Manager should finalize all presentation material and deliver it, along with the identified project documents to the GSRT one week prior to start of the GSR.

5.3 Prior to each GSR, the GSRT chair should prepare the GSRT for the efficient and rigorous conduct of the review by distributing the applicable success criteria, all presentation material, all applicable documents, and whatever guidance is deemed appropriate.

5.4 At the review, the Project Manager presents review material and/or directs the presentations by other members of the project team, providing appropriate input to maximize information exchange between the project team and the GSRT. The Project Manager should ensure discussion of risk, safety, and mission assurance topics within technical presentations to promote ownership of these overarching values by all members of the project team.

5.5 The chair shall preside at the GSR, leading the meeting and keeping the participants (GSRT, customers, project team members, line management, etc.) focused during project presentations and associated discussion. The chair should moderate the interaction between the GSRT and the project team, and collect RFAs from GSRT members and other review participants if co-sponsored by a GSRT member.

5.6 If more detailed examination of technical or programmatic details is required, then subgroup or "splinter" sessions may be conducted and the results of such discussions subsequently summarized at the plenary session.

5.7 Throughout each review, the GSRT should utilize the specific success criteria to evaluate project progress relative to expectations at the particular milestone in order to judge whether or not the review objectives have been satisfied.

5.8 Project implementation of a sufficiently rigorous EPR process shall be assessed based on discussion of EPR activity and results during the review.

5.9 Finally, although the GSR process does not formally audit compliance with NPR 7120.5, the GSRT should note any observed project deficiencies with respect to its requirements.

5.10 At the conclusion of each GSR, the chair should summarize the GSRT's initial impressions and discuss the draft RFAs in order to correct misunderstandings, identify those deemed trivial or out-of-scope, clarify language, and determine reasonable due dates for responses.

6. Reporting the Results of Goddard System Reviews

6.1 For each GSR, each member should individually submit a report to the chair, within 14 days of review completion that identifies individual observations related to the list of report topics identified below. The GSRT chair shall prepare a written narrative report, within 30 days of completion of the review, to document the review results. Copies shall be provided to the Project Manager, the applicable Program Manager, the SRO Chief, and the Director of SMA. In cases where there is involvement of

another NASA Field Center in implementing the project, a copy should also be sent to appropriate management of that center.

6.2 The report will include the following:

a. A conclusion as to whether or not project status represents successful achievement of the subject milestone, and if it does not, definition of the steps considered necessary to accomplish such (e.g., a delta-review, closure of specific RFAs),
b. Findings and attendant rationale regarding attainment of each technical and programmatic review objective, along with identification of any areas where project progress fell notably below expectations identified in the success criteria,
c. Observations regarding project compliance with the current issue of GSFC-STD-1000, with emphasis on areas of potential non-compliance,
d. An evaluation of the current project risk list along with identification of and rationale for any risk rating with which the GSRT takes exception,
e. Any additional medium-to-high risks foreseen by the GSRT that have not been identified by the project along with recommended mitigation approaches,
f. All RFAs, identifying a date by which the project response is due, and as appropriate, a notation that the RFA is deemed "critical" by the GSRT,
g. A copy of the review specific agenda, objectives, and success criteria as well as a list of all review participants and attendees that includes their organization and contact information.

6.3 The Project Manager or other appropriate institutional entity shall report the summary result of each GSR to the CMC during the Monthly Status Review following each GSR.

6.4 The Director of SMA or designee shall report major issues, if any, resulting from a GSR to the CMC during the Monthly Status Review following each GSR. In addition, on a monthly basis, the Director of SMA or designee will report the status of all open RFAs for all GSRs on all projects with emphasis on those overdue and those for which closure is considered to be critical.

6.5 The GSRT chair should formally present a GSRT assessment of the project's readiness to proceed to the CMC as part of the Key Decision Point Readiness Review (KDP-RR). The GSRT chair shall provide additional briefings as requested by the CMC, Center Director, or the Associate Administrator for the mission.

6.6 After mission level reviews where no KDP-RR is required, the GSRT should provide a summary of the review results to key CMC members via a Center Director briefing.

6.7 Prior to launch, the GSRT chair shall prepare and submit to the CMC Chair and Center Director a Flight Readiness Report (known as a "Redbook") that includes a summary of the project GSR process and results along with an assessment of the acceptability of all residual risks.

7. Closed Loop Disposition of Requests for Action

7.1 Closure of all RFAs is required as part of the GSR process.

7.2 Upon issuance, all RFAs shall define a date by which the project response is due. That date will be determined by the GSRT Chair after consultation with the Project Manager and should require timely action while allowing a reasonable period to prepare a meaningful response.

NOTE: An RFA is considered "critical" when the SRB or GSRT Chair deems that failure to satisfactorily resolve an RFA in a timely manner may create a significant safety or mission success issue, or when closure of an RFA may involve a significant programmatic impact.

7.3 The GSRT Chair shall denote those RFAs, which are considered "critical."

7.4 The Project Manager shall respond to the RFAs contained within each GSR report in a comprehensive manner by the defined due date. Responses will be in writing and directed to the GSR chair.

7.5 The GSRT chair, the RFA originator**s,** and others that the GSR may deem necessary shall review RFA responses for acceptability within 2 weeks of receipt. The chair will notify the Project Manager in writing of their approval or rejection of the responses. In the case of incomplete or unacceptable responses, the GSRT will provide rationale and supporting information to clarify the issue and guide the project as it reconsiders its response. Dialog is encouraged between the Project Manager and the GSRT to attempt to resolve any differences of opinion as part of an iterative process to close all RFAs.

7.6 If unable to evolve a mutually acceptable approach to closure of a RFA, either party may elevate the issue to the Director of SMA for resolution. If the Project Manager is dissatisfied with the resolution proposed, the Project Manager may appeal through the Director of Flight Projects.

7.7 The GSRT chair shall utilize the SRO database (Goddard Review Management System, GRMS) to record all RFAs as well as to track progress toward achievement of closure.

Appendix A – Definitions

A.1 **Goddard System Review (GSR)** - One of the series of reviews imposed by this GPR which are conducted at critical product milestones in accordance with an approved GSR Plan. The purpose of a GSR is to add value and reduce risk through the infusion of expert knowledge that is not directly responsible for the subject product development activity. A GSR assesses the results of activity to date, including those from a robust set of engineering peer reviews, to systematically evaluate technical and programmatic status using applicable objectives and success criteria for the particular milestone, thereby providing independent findings and recommendations to the product team, as well as to Goddard and Agency management.

A.2 **Key Decision Point Readiness Reviews** – A Key Decision Point (KDP) review is conducted by the program/project decision authority as a gate for the program/project proceeding to the next phase of the development lifecycle. Prior to each KDP a KDP Readiness Review will be presented to the GSFC Center Management Council.

A.3 **Pre-Launch Readiness Reviews** – A series of reviews conducted by NASA-KSC to confirm readiness of the Expendable Launch Vehicle (ELV), all payload support hardware/software, and all launch site infrastructure to proceed with launch. As a minimum, this series includes the Flight Readiness Review (FRR) and the Launch Readiness Review (LRR) (See NPR 8610.24).

A.4 **Engineering Peer Reviews (EPR)** - A series of focused, in-depth technical reviews that support the evolving design and development of a product subsystem or discipline area. The purpose of EPRs is to add value and reduce risk through infusion of expert knowledge, to confirm the intended approach, and to engender specific recommendations for improvement. An EPR provides a penetrating examination of design, analysis, manufacturing, integration, test, and operations details through its scrutiny of drawings, processes, data, and other information. (See GPR 8700.6).

A.5 **Request for Action (RFA)** - A formal written request from the Standing Review Board (SRB) or GSRT, through its chair that asks for additional information from or action by the project team.

Appendix B – Acronyms

AETD	Applied Engineering and Technology Directorate
CDR	Critical Design Review
CMC	Center Management Council
CERR	Critical Events Readiness Review
DR	Decommissioning Review
DRR	Disposal Readiness Review
EOPM	End of Prime Mission
EPR	Engineering Peer Review
FOR	Flight Operations Review
FRR	Flight Readiness Review
GRMS	Goddard Review Management System
GSFC	Goddard Space Flight Center
GSR	Goddard Systems Review
GSRT	Goddard Systems Review Team
HQ	Headquarters
KDP	Key Decision Point
KDP-RR	KDP Readiness Review
LRR	Launch Readiness Review
LVFRR	Launch Vehicle Flight Readiness Review
LVRR	Launch Vehicle Readiness Review
MCR	Mission Concept Review
MDR	Mission Design Review
MOR	Mission Operations Review
MRB	Mission Readiness Briefing
MRR	Mission Readiness Review
MSR	Monthly Status Review
MSRR	Mission System Requirements Review
MPER	Mission Pre-Environmental Review
MPSR	Mission Pre-Shipment Review
NAR	Non-Advocate Review
NASA	National Aeronautics and Space Administration
NPD	NASA Policy Document
NPR	NASA Procedural Requirement
NRRS	NASA Records Retention Schedules
OCI	Organizational Conflict of Interest
ORR	Operational Readiness Review
PCI	Personal Conflict of Interest
PDR	Preliminary Design Review
PER	Pre-Environmental Review
PLAR	Post-Launch Assessment Review
PNAR	Preliminary Non-Advocate Review
Pre-VOS	Pre-Vehicle on Stand

PSR	Pre-Shipment Review
RFA	Request for Action
RR	Readiness Review
SDR	System Definition Review
SIR	System Integration Review
SMA	Safety and Mission Assurance
SMSR	Safety and Mission Success Review
SRB	Standing Review Board
SRR	Systems Requirements Review
SRP	Systems Review Plan
SRO	Systems Review Office
STD	Standard
TRR	Test Readiness Review

CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	8/12/98	Initial Release
A	10/06/98	• Header and footer format changes. New title for GPG 1310.1 reference. • Deleted Center Director approval of SRPs. • Identified responsibilities for maintenance of quality records.
A	03/31/99	• Footer format changes. • Moved paragraph 3. Records to P6 in order to comply with GPG 1410.1.
A	04/02/99	• Deleted Product Verification/Audit Records, Peer Review Plan, and System Review and Peer Packages from Records table • Added System Review Summary and System Review Program Summary to Records Table
B	08/17/99	• Substituted GPG 7120.2 for GPG 8730.4 as a reference. • Re-defined P2 Applicability of this GPG to GSFC product to eliminate Systems Reviews for certain classes of products • Clarified responsibility of Product Manager to initiate Systems Review Plan.
C	11/02/99	• Added requirement for SRP control by Product Manager. • Added requirement for PRP control by PDL. • Added requirement for Peer Review chairperson to submit a summary within 30 calendar days. • Added clarification that the System Review Summary is submitted to Code 100 for information. • Revised flowcharts to reflect changed processes.
D	09/28/01	• Title and terminology changed to reflect new review process that consolidates the objectives of several Center and HQ reviews. • Updated wording for applicability, retained original scope. • Changed record custodian for all quality records to Project Manager. Quality records updated to reflect new process. • Deleted specific requirements for peer reviews and added references to new GPG 8700.6, Engineering Peer Reviews. • Incorporated the scope and requirements of Red Team Reviews and HQ independent assessments, as appropriate, to enable the consolidation of the review process to reduce the burden on projects and improve the value to the Agency. • Reflected the newly established role of the Systems Management Office in the independent assessment process. • Incorporated lessons learned requirements. • Deleted requirement for the System Review Program • Summary to be submitted to Code 100 for inform
E	04/11/03	• Clarified applicability to exclude products not intended for space flight. • Added metrics to measure value to projects and trend performance against the 13 system management processes. • Corrected title, custodian and references to records and

		controlled documents. • Provided for approved deviations from this procedure. • Provided for a transitional review process for projects that completed CDR prior to September 28, 2001. • Deleted process flow figures. • Added guidance for integrating safety and mission assurance topics in reviews. • Clarified expectations for IIRT assessment of compliance with NPG 7120.5, Program and Project Plans. • Added requirement for IIRT to confirm proper level of software IV&V per PMC action item closure. • Clarified IIRT report content and requirements for assessing the 13 systems management process areas and residual risk.
F	06/02/05	General: • Converted to GPR series from GPG • Completely rewrote GPR for clarification • Reflected authority of and reference to ITA / SMO consistent with GSFC re-organization of 9/19/2004 • Defined usage of "shall", "will", etc. consistent with NPR7120.5B • Updated reference to NASA Management Systems Policy • Deleted discussions related to Headquarters appointed IRTs • Deleted requirements for joint operation of IIR with HQ IRT (see intro to "Procedures" saying IIR will work to minimize burden) • Incorporated Org Title Change for ITA/SMO • Incorporated Review Effectiveness Products: -IIR Review Timeline Chart -1•0 Key Project Management Practices -"Open RFA" Status Reporting -Summary of IIR Reviews • Reference to Web-Based Review Criteria • Deleted "Lessons Learned" Discussions (Requirement is in Success Criteria) Applicability: • Added reference to GSFC IIR Process satisfying NPR 7120.5 Independent and CMR review requirements Authority: • Added NPR 7120.5 (Deleted same from references) References: • Added GSFC-STD-1000 • Added GSFC-STD-1001 Metrics: • Added PMC Feedback to Existing PM Feedback Definitions: • Deleted repetitive forms of IIR This or That • Deleted "IRT" • Added "ELV Launch Readiness Reviews" Conduct of IIRs:

		• Expanded discussion of planning phase • Added requirement for IIR Presentation and Applicable Document Availability 1 Week Prior to Review • Added IIRT requirement for rating of Key Project Management Practices, assessment of compliance with GSFC-STD-1000, and assessment of EPR implementation IIR Reporting: • Bulletized Required IIR Report Contents (Deleted Attachment) RFA Closeout: • Added Requirement for RFA Due Date and, when appropriate, Criticality Designation
G	03/05/2010	Administratively revised to show new owning organization. Administratively extended for 1 year from original expiration date.
G	03/03/2011	Administratively extended for 1 year from expiration date.
H	06/12/2012	Rewritten to be in compliance with updates to NPR 7120.5